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ABSTRACT

A survey involving a 2.5 percent sample of teachers and principals in the San Francisco area was made to determine their interest in, knowledge of, and attitudes toward educational innovation, research and development. The answers received showed that: 1) principals were more interested in research than were teachers; 2) interest in new developments was wide-reaching, 70 different innovations were mentioned when the participants were asked to list the three most promising innovations; and 3) educators vastly overestimated (by a factor of anywhere from 4 to 11 times) expenditures for research and development, but still felt that these amounts were not sufficient. The overall conclusion drawn from the study was a positive one. It was felt that, despite some lack of information about specific innovative projects and about research and development activities, the participants revealed a general awareness of innovations, a moderate to strong interest in learning more about educational discoveries, and a clear disposition to support educational innovations and to cooperate in research and development activities. (Author/PB)

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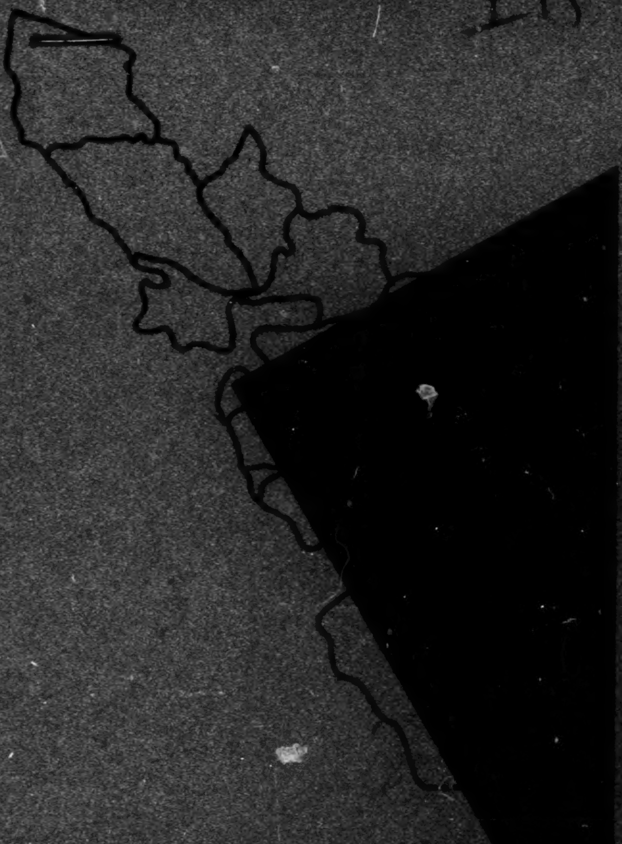

COMMUNICATIO
PROGRAM SURVE

SPRING 1967

A Survey of Public Elementary and High School Teachers and Principals in Twelve San Francisco Bay Area Counties Regarding Their Interest in, Knowledge of, and Attitudes Toward Educational Innovation, Research and Development

By PAUL D. HOOD
TAMARA C. HAYES

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October, 1967

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SUMMARY

A mail survey involving a 2.5% stratified cluster sampling of public elementary and high school teachers and their principals in twelve San Francisco Bay Area counties was made to determine their interest in, knowledge of, and attitudes toward educational innovation, research and development. The response rate of 57.5% represented 93 elementary schools and 58 high schools, including 202 elementary school teachers, 88 elementary school principals, 150 high school teachers, and 39 high school principals.

Among thirty sample topics for television programs, "new developments in the teaching of reading" and "the changing role of the teacher" lead the list. Although there are a number of significant interest differences between elementary and high school teachers and principals, the most notable findings are that average interest levels in most topic areas are moderate to strong and that generally the principals express greater interest than the teachers.

The responses to the questionnaire item, "list the three most promising innovations known to you," were so various that they required seventy content categories to code. Among elementary teachers and principals the top ten innovations, in rank order of frequency of mention, are 1) non-graded primary schools, 2) individualized instructional techniques, 3) team teaching, 4) new audio-visual tools and methods, 5) programmed instruction, 6) flexible or modular scheduling, 7) new mathematics, 8) learning laboratories and centers, 9) instructional television, and 10) new English. The list is similar for high school teachers and principals except that new scheduling methods leads the list with team teaching second, audio-visual developments third, and vocational education among the top ten. A similar request to list two questionable innovations brought high frequency replies for team teaching, programmed instruction, teaching of foreign languages in the primary grades, state mandated programs and texts, learning laboratories, and new audio-visual efforts. Replies to the innovation question were scored for "knowledge" and "attitude." The results suggest that the majority of teachers and principals may lack knowledge of specific projects but that they are in general favorably inclined toward educational innovations.

An item requesting estimates of the percentage of national educational expenditure for research and development revealed that principals and teachers are ill informed, estimating current educational R and D expenditure at four to eleven times its actual amount. On the other hand the ratio of the amount they felt should be spent on educational R and D to their estimate of current expenditure averaged from 4.5 for elementary teachers to 9.0 for high school ~~teachers~~ principals. By comparison, teachers and principals generally estimated the *current* drug and medicine R and D percentage at twice the amount they thought *should* be spent in education.

Response to another question revealed that informal personal contacts, research reports and bulletins, professional journals, and public media are high frequency sources of information about innovations, research and development. Principals at both levels reported significantly more frequent use than their teachers of research reports and bulletins, professional journals, conventions and conferences, workshops, visits, and informal contacts.

The teachers and principals were asked to rank, according to importance, seven characteristics of an information system. The resulting overall rank order was 1) ease of access, 2) currency, 3) comprehensive coverage, 4) speed of receipt, 5) evaluation of material, 6) thoroughly documented research data, and 7) flexibility in the amount of detail. Elementary teachers placed more emphasis on speed of receipt and flexibility in detail of requested information while principals placed greater importance on evaluation and thoroughly documented research data.

The final portion of the questionnaire dealt with a hypothetical proposal, in the form of a one page letter, to initiate inservice teacher training, classroom observation, and pre- and posttesting of students to evaluate a promising new curriculum. Respondents were asked for their own reactions and for estimates of the reactions of the other teachers in the district, the school administration, and the school board. The results suggest that the great majority of public school teachers and principals would be personally inclined to take part in such a field test. School personnel also believe that the majority of other teachers in the district would be inclined to participate. The results are similar in respect to the school administration although there are substantial numbers of teachers (35% for high school and 44% for elementary) who are "not sure." This effect is even more evident in the case of the school board's approval; very few believed the board would disapprove, but over half the teachers were "not sure." Fewer principals were unsure, probably indicative of their better understanding of administration and board policy. It is suggested that the high incidence of "not sure" responses may indicate that few such proposals have been submitted to the schools and that teachers are unaware of administration attitudes or policy on this subject.

The overall conclusion is a positive one. Despite some lack of information about specific innovative projects and R and D activities. the teachers and principals revealed a general awareness, a moderate to strong interest in learning more, and a clear, prevalent disposition to support educational innovations and to cooperate in research and development efforts.

THE COMMUNICATION PROGRAM SURVEY - SPRING 1967

Introduction

Title IV of the Elementary and Secondary Education Act of 1965 (Public Law 89-10) made possible the creation of regional laboratories to conduct programmatic research and development in order that proven innovations in education can find practical application in the nation's schools at the earliest possible date. The act specifies that the laboratories are to identify educational problems, conduct and coordinate research and research-related activities in problem areas, and particularly to disseminate findings for implementation in the schools.

The Far West Laboratory for Educational Research and Development has undertaken two major research and development programs and a number of auxiliary projects. The primary R and D program, designed to develop and implement inservice training for teachers, is presently developing a series of "minicourses" which will employ microteaching techniques to teach specific skills in four areas: basic skills, skills required to instruct non-typical student groups, skills required in new instructional programs, and skills required for successful employment of new curricula.

The secondary R and D program seeks to improve dissemination and productive use of research and development information by school personnel who make decisions affecting school organization and operation. The objectives of this program are 1) to develop motivation among school personnel to be informed about new developments in education, 2) to provide efficient systems through which school personnel can have ready access to relevant information, and 3) to develop organizational arrangements within school systems and personnel training programs that will permit school personnel to use the research and development information effectually.

In order to achieve the first goal, the Laboratory is employing mass media to inform teachers and other school personnel about significant educational innovations and research-based developments. A pilot series of five half-hour programs was broadcast over KQED, the San Francisco educational television station, in April and May, 1967. A second series began in October.

A survey was made of school personnel in the KQED viewing area prior to the Spring 1967 T.V. series. The results of the survey will be used in planning subsequent efforts in the communication program and will provide a basis for assessing change and inferring impact of program activities.

PLAN OF SURVEY PROCEDURES

Statement of Purpose. The objective of this survey was to develop baseline data on elementary and secondary public school teachers and principals of the San Francisco Bay Area regarding their interest in, knowledge of, and attitudes toward educational innovation, research and development. The survey also sought to discover the present sources used by teachers and principals to keep themselves informed about new developments in education, and determine the order in which they rank seven desired characteristics of an information service.

Population. The survey called for coverage of all regular, full-time elementary and secondary teachers and principals in the public schools of twelve Bay Area counties: Alameda, Contra Costa, Marin, Monterey, Napa, San Benito, San Francisco, San Mateo, Santa Clara, Santa Cruz, Solano and Sonoma. This is approximately the area covered by KQED.

Sampling Plan. After study of alternative sampling plans, a procedure was chosen which is technically known as paired selections of primary units with probability of selection proportional to size. This is a stratified cluster sampling in which pairs of schools are taken by random selection from adjacent geographical areas (the same or neighboring districts), with the probability of the school's selection proportional to the size of the school, and the probability of the selection of a teacher from the school inversely proportional to the school's size. The result was to maintain a constant sampling fraction, set at approximately 2.5%, in order to sample 200 schools with approximately three or four teachers in each school cluster. In other words, every public school elementary and secondary teacher in the sample counties had an equal chance, approximately 25 in 1,000, of being chosen. The school principals were automatically included. Note that this is not a random sample of all principals but only of those who supervise teachers selected for the survey. Details of the sampling procedure are covered in Appendix A.

Type of Solicitation. Because of the size, geographic scope, and prescribed budget of the survey, the questionnaires were submitted by mail. The survey plan was first sent to 83 district superintendents for their approval, and personnel rosters were requested for the selected schools. A copy of the letter is found in Appendix B. Of the 136 elementary schools, 13 were precluded from the survey by the refusal of either the superintendent, the principal, or the faculty. All the 64 high schools were included.

As soon as approval was received, the teacher roster provided by the school (or, in the case of high schools, a list available in the California School Directory) was used to obtain a subsample of teachers. A personal letter with a six-page questionnaire was sent to each selected teacher. Approximately three to four weeks later a second letter and a shorter two page questionnaire were sent with a return envelope to those who failed to reply to the first letter.

The return rate of the first mailing was 47%. Response to the second mailing raised the rate to 57.5%. Copies of these letters and questionnaires are in Appendix B.

Recording and Analysis. The questionnaires were precoded for key punching and transferred to IBM cards for statistical analysis. A school was included if represented by at least one complete six-page questionnaire from a teacher. (Schools with responses merely from the principal or with only short form responses from teachers were eliminated.) The questionnaire data was divided into four separate groups: elementary school teachers, secondary school teachers, elementary school principals, and secondary school principals. Item distributions, means and standard errors of the means were calculated for each group. Details of the statistical treatment are reported in Appendix A.

THE SURVEY INSTRUMENT AND SAMPLE CHARACTERISTICS

There were several types of information the Laboratory wished to obtain from teachers and principals. First, what are their interests in various topics which might be presented on our television programs? Second, what is their knowledge of and attitude toward educational innovation, research and development? Third, how do they keep themselves informed about new developments in education? Fourth, what characteristics do they think most important in an R and D information service that would be responsive to their needs? Finally, how willing are they to participate in research and development in their schools and classrooms?

The questionnaire face sheet requested name, school, present position, years experience as teacher or administrator, and grades and subject taught. It also provided three multiple choice items regarding presence of minority groups, population density, and socio-economic background of the student population. These questions were considered most relevant for possible examination of differences in interest or attitude. School enrollment figures were added from published sources.

There were 93 elementary schools (grades K-9) and 58 high schools in the final sample. The elementary school enrollment averaged 608, while the average high school enrollment was 1,720. The teachers in both the elementary and high schools averaged approximately 10.5 years experience.

Seventy percent of the elementary school teachers were classified as teaching general elementary subjects, 9% English or foreign languages, 6% kindergarten or pre-school, 4% science, 4% special education, 3% mathematics, 2% social studies, 1% health or physical education, and 1% shop or vocational education.

Thirty-five percent of the high school teachers were classified as teaching English or foreign languages, 21% driver education, business or vocational education, 11% social studies, 9% health or physical education, 8% mathematics, 8% fine arts, 5% science, and 3% special education.

Approximately 70% of the elementary schools had no minority group constituting more than 20% of the student population. Ten percent reported a Negro student population above 20%; 17% reported a Mexican-American population above 20%; and 2% reported both Negro and Mexican-American populations above 20%.

The percentage of minority groups in the high schools was similar except that nearly 5% of the schools reported that both Negro and Mexican-American groups represented more than 20% of their student bodies.

Approximately 3% of the elementary schools served an essentially rural area, 19% small city or town, 50% suburban, 15% urban, and 13% large urban. For the high schools the figures were quite similar: 3%, 18%, 47%, 15% and 17%, respectively.

Seventeen percent of the elementary school teachers described the socio-economic background of the majority of their student population as lower income, 54% as lower middle, 29% as upper middle and 1% as upper income.

High school teachers and principals reported that somewhat more of the majority of their students come from upper middle income families; the corresponding percentages were: 12% lower, 46% lower middle, 41% upper middle and 2% upper income.

INTEREST AREAS

Page 2 of the questionnaire lists thirty sample topics which might be treated by a series of educational research and development television programs. The first ten represent an effort to divide the curriculum content into a small but reasonable number of categories. The remaining topics on new methods, organization or technology, and special topics were culled from several reports on new developments in education. Figures 1, 2, and 3 summarize the results. Complete data on distributions, size of samples, means, standard errors of the means and results of difference tests are contained in Table 5 in Appendix C.

Curriculum Areas. It was observed that interest is moderately high in most of the ten curriculum areas; only foreign language instruction, health and physical education, and vocational education had averages below the "moderate interest" level. New developments in the teaching of reading was the most popular choice for every group, including the high school teachers (despite the fact that their mean interest level was significantly lower than that of their own principals or the elementary teachers). The second choice varied considerably: modern math for elementary teachers, vocational education for both high school teachers and principals, and a tie between English language instruction, writing and composition, and science for elementary principals.

There are many statistically significant differences in interest levels.[1] Elementary teachers indicated higher interest than high school teachers in new developments in modern math, science, reading, English language instruction, social science, and writing and composition. On the other hand, there was a remarkably higher interest of high school teachers in vocational education.

There are only two statistically significant comparisons between elementary principals and high school principals: the high school principals indicated higher interest in new developments in modern foreign language instruction and in vocational education.

In general the principals of both elementary and high schools indicated greater interest in new developments than did their teachers. The elementary principals recorded higher interest in

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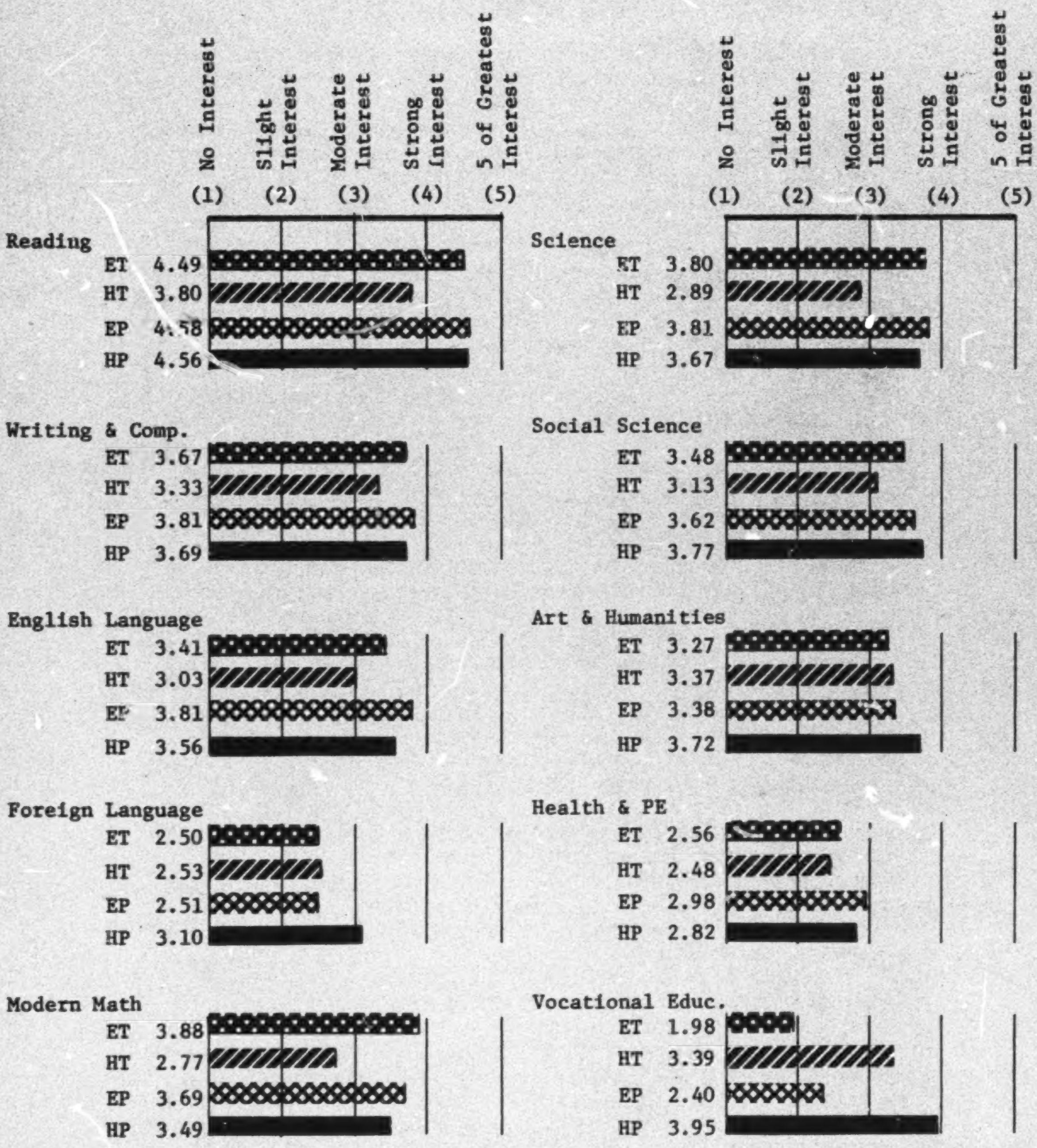
1. All tests of significance were made by t-tests set at the .05 level. In general the tests of differences between teachers and principals are conservative because the correlation between teachers and principals was not used in computing the t-test. Differences between elementary school teachers and high school principals and high school teachers and elementary school principals were not computed.

Figure 1 Interest in new developments in the teaching of:



these areas: English language instruction, health and physical education, and vocational education. The high school principals were consistently higher in all ten curriculum areas with especially significant differences in science and reading.

It should be emphasized that despite these differences between groups, the overall interest levels of all groups are moderately high. Reference to the percentage distributions in Table 5 of Appendix C reveals that only three subjects (modern foreign language instruction, health and physical education, and vocational education) were checked by more than 50% of any group in the "no interest" or "slight interest" categories, and that in each case, only two of the four groups exceeded 50%.

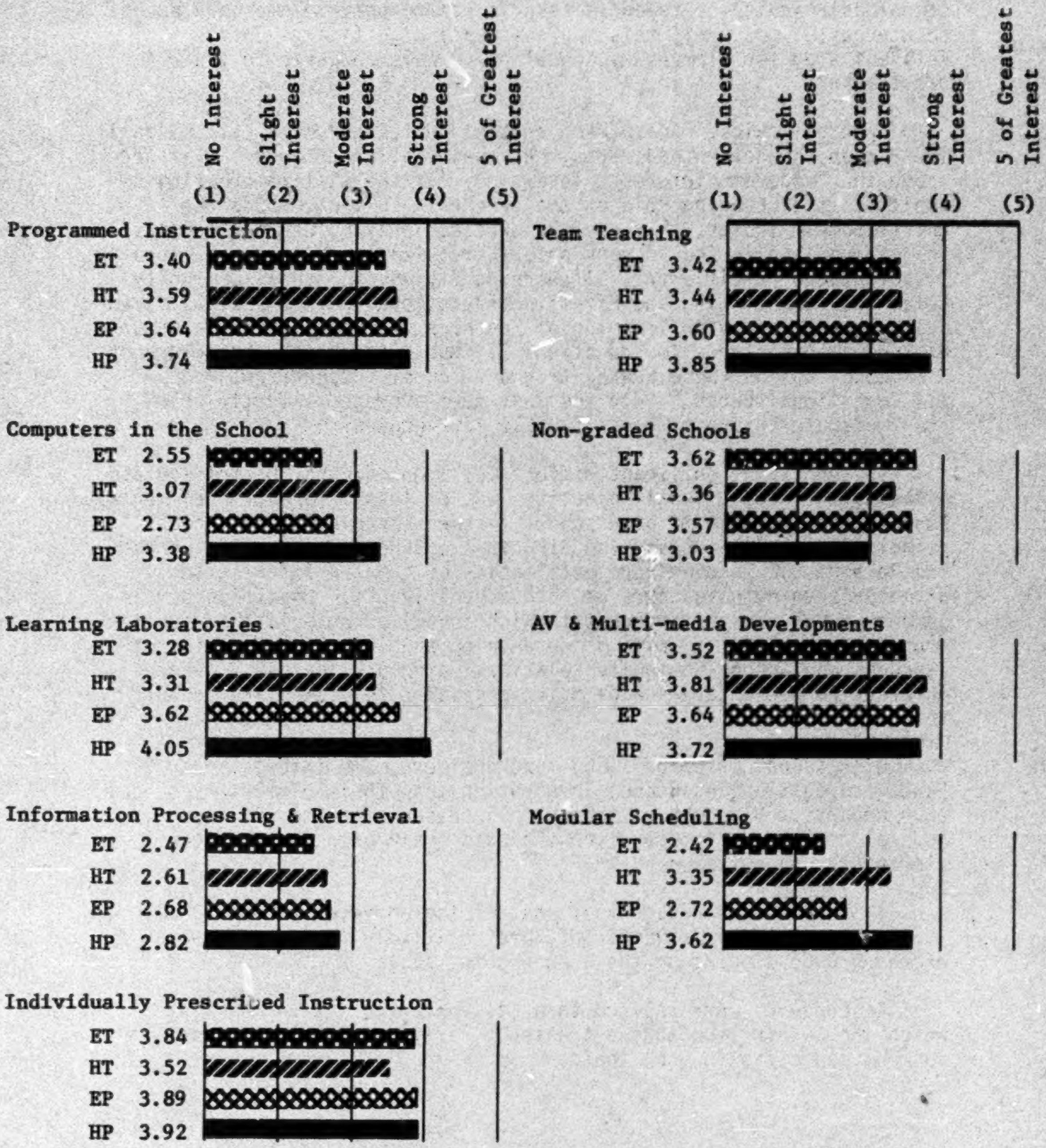
Generally speaking teachers are interested in new developments in curriculum areas. Elementary teachers, possibly because of their lack of subject specialization or because of the many new curriculum developments in the K-8 levels, with the conspicuous exception of vocational education, tend to express greater interest in all topics than their high school counterparts. The principals, especially the high school principals, indicate even greater interest than their teachers.

New Methods, Organization or Technology in Education. Again, interest in this area is moderately high, averaging above the "moderate interest" level. It is slightly lower than the curriculum area averages for elementary teachers and principals and high school principals, but higher than the curriculum averages for high school teachers. The overall rank order of interest from highest to lowest is 1) Individually Prescribed Instruction, 2) audio-visual and multi-media developments, 3) programmed instruction, 4) team teaching, 5) non-graded schools, 6) learning laboratories, 7) modular scheduling, 8) computers in the school, and 9) information reduction, storage and retrieval. The last three items averaged below the "moderate interest" level for elementary school teachers, the last two for elementary school principals.

Among the significant group differences, high school principals and teachers were more interested in computers in the school than their elementary school counterparts. Principals at both levels expressed greater interest in learning laboratories than did their teachers; high school principals were more interested in this topic than elementary principals.

Individually Prescribed Instruction, a high interest area for all groups, was significantly higher for elementary school teachers than for high school teachers. On the other hand, another high interest area, audio-visual and multi-media development, was of greater interest to high school teachers than to elementary teachers. Team teaching was of more interest to high school principals than to high school teachers.

Figure 2 Interest in new methods, organization or technology in education:



Non-graded schools, reasonably enough, was a topic of greater interest to elementary school principals than to high school principals. Conversely, modular scheduling was of more interest to high school principals and teachers than it was to their elementary school counterparts; moreover, this subject was a significantly higher interest area for elementary school principals compared to their own teachers.

Special Topics. The eleven special topics averaged just slightly lower than the new methods area, but again, all four groups averaged above the "moderate interest" level. By far the most interesting topic was the Changing Role of the Teacher. In fact, among the thirty sample topics, this one was exceeded only by new developments in reading. Following in rank order were: 2) Teaching the Culturally Disadvantaged or Different, 3) Learning Styles, 4) School-Community Relations, 5) Defining and Assessing Educational Objectives, 6) Microteaching and Inservice Training of Teachers, 7) Cognitive Development, 8) Federal Assistance to Education, 9) Education and the Structure of Knowledge, 10) De Facto Segregation and School Integration, and 11) Educational Parks. Only the last item averaged slightly below the "moderate interest" level for all four groups.

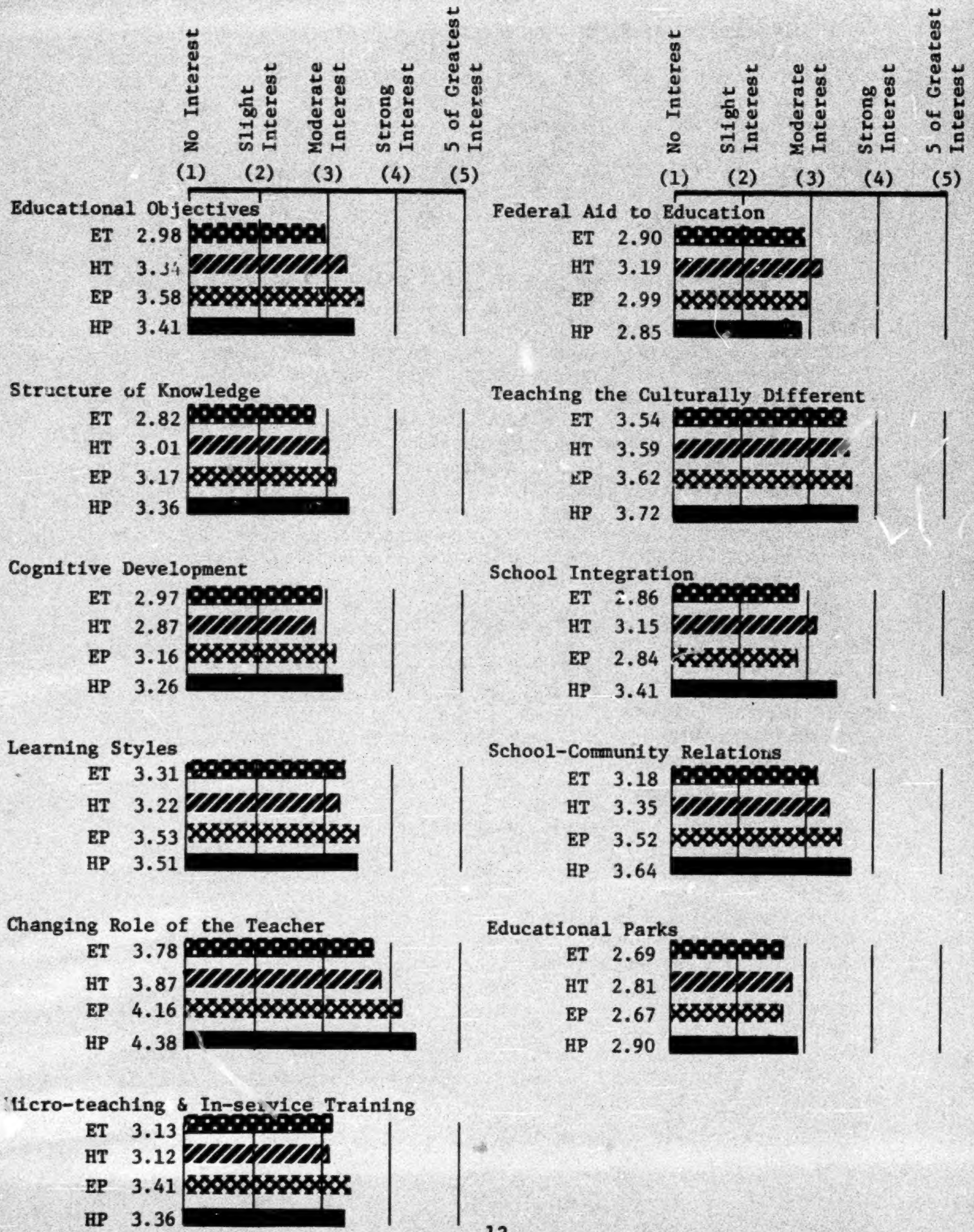
In terms of significant differences among groups, Definition and Assessment of Educational Objectives was of less interest to elementary school teachers than to high school teachers or elementary school principals. Education and the Structure of Knowledge and The Changing Role of the Teacher were both topics of greater interest to principals than to teachers at both school levels. Cognitive Development was of greater interest to high school principals than to high school teachers; similarly, Microteaching and Inservice Training of Teachers and School-Community Relations were both topics of greater interest to elementary school principals than to elementary school teachers.

High school principals and teachers were more interested in De Facto Segregation and School Integration than their elementary school counterparts. High school teachers expressed a greater interest in Federal Assistance to Education than did their principals or the elementary school teachers.

It should be stressed that most of the above differences, although statistically significant, are relatively minor and never exceed 0.6 of a point on the 1 to 5 point scale.

Respondents were invited to write in topics not on the list which they would like to see treated. Forty-one percent did so, in most cases listing one topic.

Figure 3 Interest in special topics:



ATTITUDES TOWARD INNOVATIONS, RESEARCH AND DEVELOPMENT

Promising and Less Promising Educational Innovations. The second survey subject area concerns knowledge of and attitudes toward educational innovation, research and development. Because of difficulties in designing appropriate objective items in this area, the respondent was simply asked to list the three most promising innovations known to him and to briefly indicate why he believed each innovation was especially worthwhile or important. To balance the positive aspect, the respondent was also asked to list "two innovations being urged on the schools that are most open to question" and to indicate why each is questionable or less than promising. The assumption was that the answers could be scored, at least roughly, for knowledge and attitude.

For the promising innovations question, most teachers and principals had no trouble listing three innovations. There were only 15% blank, including 9% who failed to answer the item. The answers were coded into seventy content categories. Among elementary teachers and principals the top ten innovations, in rank order of frequency of mention were 1) non-graded primary school, 2) individualized instructional techniques (I.P.I., C.A.I., etc.), 3) team teaching, 4) new audio-visual tools and methods, 5) programmed instruction, 6) flexible or modular scheduling, 7) new mathematics, 8) learning laboratories and centers, 9) instructional television, and 10) new English (structural linguistics, etc.). The list is similar for high school teachers and principals except that new scheduling methods leads the list with team teaching second, audio-visual developments third and vocational education among the top ten.

Team teaching has top place among the innovations considered questionable or less than promising. Programmed instruction is also high for both elementary and high school groups. The teaching of foreign languages in the primary grades is a frequently questioned innovation for elementary school teachers and principals, while state mandated programs and texts, learning laboratories, and new audio-visual efforts (including instructional television) are frequently questioned innovations for high school teachers and principals.

The response to these two questions concerning innovations (list five and give a reason for each) was scored for knowledge on a simple scale which allowed zero points for no answer, one point for an incomplete list (less than five items), two points for a complete list of items which were characterized by general or common answers and reasons, three points for a complete list which mentioned two or more specific projects by name, and four points for a complete list which included five specific names or showed considerable specific knowledge or well-thought-out reasons. Obviously, this scale is liable to some subjective bias, but it does provide a rough indicator of knowledge if it is assumed that respondents who can at least specify innovations by name and give good supporting reasons are better informed than those who only repeat labels provided by suggested topics on the previous page of the questionnaire.

None of the four comparison groups (teacher, principal, elementary and high school) reveal significantly different levels of knowledge. The modal response was an incomplete list (usually failing to list two "less than promising" innovations). The average was somewhat less than if everyone had supplied a complete list of general items, e.g. "team teaching," "programmed instruction," or "instructional television." A little over 40% of the principals and about 30% of the teachers (34% for elementary and 29% for high school) responded with specific project or activity names, e.g. Initial Teaching Alphabet, Individually Prescribed Instruction, S.R.A. Reading Materials. Of course, the nature of the questions did not suggest the need to name actual projects, but there is an indication that school personnel are not well informed about specific innovations.

Replies to the same innovation question were scored for inferred attitude toward innovation. Again, a simple subjective scale was employed with the following score definitions: one point if the response is judged clearly unfavorable, two points if it is judged possibly unfavorable, three points if the reply is neutral or indeterminate, four points if it is judged possibly favorable, and five points if it is judged clearly favorable. Table 1 presents the results.

Table 1

Innovation Attitude, N's, Means, S.E. of Means, and Score Distribution

						Score		
	N	Mean	S.E. m	1	2	3	4	5
				%	%	%	%	%
Elementary School Teachers	202	4.06	0.059	0	3	20	44	33
High School Teachers	150	4.04	0.063	0	1	26	40	33
Elementary School Principals	88	4.19	0.079	0	1	16	45	38
High School Principals	39	4.31	0.128	0	3	13	36	49

Again, there are no significant differences among the four comparisons. Although the basis for scoring the replies is subjective, the interpretation of a generally positive attitude toward innovation seems valid and will be further corroborated in a later section on the XYZ Curriculum proposal. This should not be taken as a blanket endorsement; the replies to the item concerning questionable innovations contained numerous criticisms which were supported by convincing reasons. Team teaching, programmed instruction, foreign language instruction in the primary grades, and learning laboratories, for example, are innovations which have not been well received by some teachers and principals. Despite the criticism, the overall tone of the replies is positive and constructive, with straightforward differences of opinion about which innovations are appropriate when and where.

R and D Percentage Estimates. A second attempt to interpret attitude was made through an indirect technique which requested estimates of 1) *current* expenditure on educational research and development as a percentage of the total national expenditure for education, 2) percentage of total national expenditure for education which *should* be spent on educational research and development, and 3) percent of net sales which manufacturers of drugs and medicines spend on research and development. Answers to items 1 and 3 can be checked for accuracy of estimate. The ratios of item 2 to item 1 and of item 3 to item 1 provide some indication of attitude in terms of what increase in educational R and D is desirable and how educational R and D was perceived compared to the R and D conscious pharmaceutical industry.

Possibly the best way to dispose of the accuracy of this question is to say, as some teachers wrote in the margin, "I don't know." The estimates of total national expenditure for educational research and development were generally high, averaging 11.27% for elementary school teachers, 7.87% for high school teachers, 6.84% for elementary school principals and 4.15% for high school principals. In view of the fact that for the past few years the educational R and D expenditure has been a fraction approaching 1%, the estimates are quite inaccurate. If any answer below 2% were accepted, the percentage of "correct" answers would be 15% for elementary school teachers, 33% for high school teachers, 44% for elementary school principals and 32% for high school principals.

When the ratio of what *should* be spent on educational R and D to *current* expenditure is computed for each respondent the following average ratios result: 4.46 for elementary school teachers, 7.97 for high school teachers, 8.17 for elementary school principals, and 9.02 for high school principals.[2] Corresponding ratios of estimates of current drug and medecine R and D to educational R and D are, respectively, 8.57, 13.16, 16.09, and 19.20 (see Footnote 2). Clearly, school personnel are in favor of marked increases in educational R and D effort; however, they perceive *current* drug and medecine R and D expenditure as nearly twice the amount they believe *should* be spent on educational R and D and eight to nineteen times as much as they believe is *currently* being spent on educational R and D. It should also be noted that 16% of the respondents indicated *should* to *current* educational R and D ratios at or below 1; i.e., they felt that less money should be spent on educational R and D.

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[2] These are averages of individual ratios with extreme ratios (e.g. 15% should to .01% current) truncated to 50 to 1. For comparison, the ratio of the averages for should to current educational R & D, reported in Table 6 of Appendix C, are: 2.01, 2.14, 2.28, and 3.41.

SOURCES OF EDUCATIONAL R AND D INFORMATION

The questionnaire asked: "Where do you obtain usable information concerning educational innovations, research and development?" The respondent was asked to indicate how frequently he utilized each of eleven sources by placing a check in one of four columns: "At least once a week," "At least once a month," "At least once a year," and "Practically never." Table 2 presents the distribution of replies for the four groups.

The four highest used media in rank order are: for elementary teachers, 1) informal contacts, 2) professional journals, 3) public media, and 4) audio-visual materials; for high school teachers, 1) public media, 2) informal contacts, 3) professional journals, and 4) research reports and bulletins; for elementary principals, 1) personal contacts, 2) research reports and bulletins, 3) professional journals, and 4) public media; and for high school principals, 1) professional journals, 2) research reports and bulletins, 3) personal contacts, and 4) public media. Both elementary and high school principals report significantly more frequent use than their teachers of 1) research reports and bulletins, 2) professional journals, 3) conventions and conferences, 4) workshops, 5) visits, and 6) informal personal contacts. Average use of any information source was never significantly higher for teachers than for principals.

When compared to high school principals, elementary principals report significantly greater use of workshops as an information source. Elementary teachers report more frequent use than high school teachers of audio-visual materials, educational television, and workshops, while high school teachers use conventions and conferences and public media more often than elementary teachers.

TABLE 2

SOURCES OF EDUCATIONAL R & D INFORMATION

	At least: Once a week	Once a month	Once a year	Practically never
1. Professional books	%	%	%	%
Elem. Teachers	21	40	29	11
H. S. Teachers	26	34	28	12
Elem. Principals	14	62	22	3
H. S. Principals	17	70	7	7
2. Research reports and bulletins				
Elem. Teachers	18	51	22	9
H. S. Teachers	28	47	18	7
Elem. Principals	48	47	4	1
H. S. Principals	57	40	0	3
3. Professional journals				
Elem. Teachers	15	76	6	4
H. S. Teachers	24	66	6	3
Elem. Principals	41	58	0	1
H. S. Principals	60	40	0	0
4. Audio-visual materials				
Elem. Teachers	40	25	19	16
H. S. Teachers	26	38	16	21
Elem. Principals	18	51	14	18
H. S. Principals	13	60	7	20
5. Educational television				
Elem. Teachers	35	26	16	23
H. S. Teachers	21	26	18	36
Elem. Principals	29	41	14	16
H. S. Principals	13	47	10	30
6. Special courses				
Elem. Teachers	15	10	64	11
H. S. Teachers	13	4	62	21
Elem. Principals	7	11	63	19
H. S. Principals	3	7	57	33

	At least: Once a week	Once a month	Once a year	Practically never
7. Conventions and Conferences	%	%	%	%
Elem. Teachers	0	9	58	33
H. S. Teachers	2	8	74	17
Elem. Principals	1	18	78	3
H S. Principals	3	20	77	0
8. Workshops				
Elem. Teachers	2	15	64	19
H. S. Teachers	2	2	55	41
Elem. Principals	4	23	66	7
H. S. Principals	0	10	77	13
9. Visits				
Elem. Teachers	1	9	48	42
H. S. Teachers	2	7	46	45
Elem. Principals	8	27	49	15
H. S. Principals	7	30	50	13
10. Personal contact				
Elem. Teachers	43	34	16	7
H. S. Teachers	42	37	14	6
Elem. Principals	53	38	7	1
H. S. Principals	50	43	7	0
11. Public media				
Elem. Teachers	40	27	23	10
H. S. Teachers	51	30	14	6
Elem. Principals	47	30	15	8
H. S. Principals	59	31	0	10

DESIRED CHARACTERISTICS OF AN INFORMATION SERVICE

This question, like the previous one on information sources, was posed to provide information which might be useful in the design of "efficient systems through which school personnel can have ready access to relevant information," the second of three objectives of the Laboratory's Communication Program. The question was prefaced by the statement:

> "If a service were designed to provide school personnel with information about new developments and alternatives which might assist them in making choices or decisions about school matters, there would have to be some compromise in the design of its characteristics to keep it within cost limits."

The respondent was asked to rank seven characteristics in terms of their importance to him. The results are reported in Table 3.

TABLE 3

Rank Order of Average Ranks of Seven Characteristics of an Educational Information Service

(1 = most desired; 7 = least desired)

	Teachers		Principals	
	Elem.	H.S.	Elem.	H.S.
Ease of Access to the Information	1	1	1	1
Currency of the Information	2	2	2	2
Comprehensive Coverage	4	3	5	5
Speed of Receipt of Request	3	4	6	6
Evaluation of the Material	5	5	3	3
Thoroughly Documented Research Data	6	7	4	4
Flexibility in the Amount of Detail	7	6	7	7

Note that the rankings for principals are in perfect agreement. There are slight discrepancies between the elementary and high school teachers and somewhat larger ones between teachers and principals. Table 7 in Appendix C presents complete data on sample size, means, standard errors of means, and the distribution of ranks for each of the four groups. Reference to that data indicates that several of the characteristics produced significant differences at the 5% level. Elementary teachers considered speed of receipt more important than did their principals or the high school teachers; despite identical ranks in Table 2 above, elementary teachers ranked flexibility in amount of detail more desirable than did their principals; both elementary and high school principals placed more importance than their teachers on evaluation of the information provided, and elementary principals stressed the availability of thoroughly documented research data more than did their teachers.

READINESS TO PARTICIPATE IN FIELD TESTING OF R AND D

The final element in the survey sought an indication of the readiness of schools to assist in educational research and development. Initial trials of the questionnaire had indicated that school personnel find it difficult to answer general or vaguely defined questions, but that they can reply to specific, reasonably detailed propositions. The questions in this section were preceded by a hypothetical request for assistance presented in the form of a letter. The essential elements of the letter are as follows: . . . a project has been in progress for several years under the direction of a responsible group of educators, teachers, and academicians. The work thus far shows promise, but a field evaluation is now necessary because of the unusual characteristics of the proposed curriculum. Participation will be entirely voluntary and will include several teacher training workshops, pre- and posttesting of students, and some classroom observation. Reimbursement will be made for extra time spent on the project. No commitment is called for at this time, but a request is made for an indication of personal interest and an estimate of the reaction of other teachers, the school administration, and the school board. . . .

After several trial proposals were written, the XYZ Curriculum, a hypothetical R and D effort of the Teacher Service Project of the State University, was selected as a kind of request that might be generally applicable to nearly all teachers and principals in both elementary and secondary grades. A copy of the letter appears in the questionnaire in Appendix B.

Immediately following the XYZ Curriculum letter were two questions requesting a list of attractive or unattractive aspects of the proposal. Eighty-five percent of the respondents wrote some answer regarding its attractiveness, and 40% of these mentioned specific positive values. Sixty-four percent listed unattractive aspects, and 47% of these mentioned specific negative elements.

Table 4 on the following page presents the results for the respondents' reactions to the proposal and their estimates of the reaction of other teachers in the district, the school administration, and the school board. Table 8 in Appendix C presents data on N's, means, standard errors of the means and t-test results. Although these results are fairly self-explanatory, a few comments should be made. First, it seems clear that principals and teachers at both school levels are favorably disposed to consider an educational R and D proposal such as the XYZ Curriculum. It is also clear that while they view other teachers as being less positive than themselves, the majority of teachers and a substantial majority of principals believed that other teachers would be interested or inclined to participate. Similarly, very few teachers believed that the school administration would discourage participation, but many were not sure of the administration's response. In the case of the school board's approval, again few thought that the school board would disapprove, but over half of the teachers were not sure. There are fewer principals who are unsure, probably indicative

TABLE 4

XYZ Curriculum Proposal Responses

	Elem. School Teachers	High School Teachers	Elem. School Principals	High School Principals
What is your personal response to this request?	%	%	%	%
--I would definitely refuse to participate	1	2	0	13
--I would be inclined *not* to participate but might agree if most other teachers and schools participated.	8	5	1	0
--I would be inclined to participate, but would need much more information before deciding.	44	45	42	16
--I would be quite interested in considering this proposal but would like more information.	47	48	57	71
How do you think most teachers in your district would respond?				
--They would refuse	2	3	0	0
--They would be inclined *not* to participate	33	40	15	23
--They would be inclined to participate	59	50	62	52
--They would be quite interested in participating.	5	6	23	26
How do you think the school administration would respond?				
--It would encourage participation	56	63	78	84
--I am not sure	44	35	22	13
--It would discourage participation	0	2	0	3
How do you think the school board would respond?				
--It would approve	35	44	61	74
--I am not sure	61	54	38	26
--It would disapprove	4	2	1	0

of their better understanding of administration and board attitudes and policies. This high incidence of "not sure" responses does suggest, however, that there has not been a sufficient incidence of educational R and D proposals submitted to the schools to provide teachers with a basis for estimating the response of the administration or the school board.

Finally, it is noted that the principals of both elementary and high schools are consistently more positive in their responses than are their teachers; in every case, except the personal response category for the high school personnel, these differences are statistically significant at the .05 level.

The overall conclusion is an encouraging one. The XYZ Curriculum proposal is hypothetical, and sufficiently detailed that it might not apply to all R and D request situations. However, the high percentage of positive perceptions with respect to other teachers, the administration, and the school board affords a reasonable basis for inferring the existence of a positive climate for R and D participation on the part of the public schools in the twelve San Francisco Bay Area counties.

Appendix A

SAMPLING PLAN AND STATISTICAL TREATMENT

A simple random sampling of teachers would have been preferred but was not feasible because up-to-date source lists for elementary school teachers were not available. (It would have been necessary to write to county offices and/or school districts to obtain teacher lists for all schools in the area and then to enumerate each list.)

The choice of cluster sampling was obvious because it was possible to identify schools as the primary sampling units (PSU) through the *Directory of Administrative and Supervisory Personnel, California Public Schools*. Taking the school as the cluster, it was then necessary to obtain district approval to include the school in the survey and to request rosters of personnel from the district for each selected school. The number of teachers in each school varied between two or three to as many as 150. In order to avoid such large variation in cluster size, a measure of size (MOS) technique was employed using student enrollment figures published in the California School Directory. To further simplify the statistical calculations and take advantage of school and geographic stratification, a technique known as paired selection of primaries (schools) with probabilities proportionate to size was used.

After some study and calculation a sample of 200 schools was selected with approximately four teachers per school. Student enrollment in the twelve counties is one million, hence if two schools were selected in each stratum, 100 strata of 10,000 student enrollment was convenient. The procedure was to select two random four-digit numbers (0000-9999) and apply these to accumulated totals of student enrollment in each stratum. Schools were taken into the sample when their enrollment accumulation interval included a selected random number. Selection was with replacement, so that occasionally a school was chosen more than once. (In such cases the school was double subsampled, with each subsample treated as a separate cluster). Subsampling within the selected school was based on finding the nearest whole number according to the formula:

$$x = \text{Number in subsample} = \frac{\text{Number of teachers in school} \times 100}{\text{Number of students in school}}$$

This particular formula is based on the rough assumption that there is approximately one teacher for each twenty-five students. For instance in a school of 400 students there would be approximately sixteen teachers. Substitution of these values in the above formula, (16 x 100)/400 = x, yields the desired subsample of four teachers. The number can vary as the ratio of 1:25 varies but generally guarantees a subsample close to four. The calculated number of teachers was then selected randomly from lists provided by the district office.

From the total student enrollment of one million, 100 strata of 10,000 students each were established, with separate strata for elementary schools and high schools. The next step was to proceed alphabetically through districts and schools within the districts in each county. This method tended to pair schools which were often in the same district, almost always in the same county and always in the same level, either elementary or high school. This sampling procedure also tended to select schools in proportion to their size (and hence indirectly in proportion to number of teachers). That is, the larger schools had a proportionately greater chance of being chosen, but the sampling fraction within the school was *inversely* proportional to size (i.e., a proportionally smaller number of teachers were chosen from a large school than from a small one). The over-all effect was to maintain a constant sampling fraction of teachers of approximately 2%.

One purpose of the survey was a comparison of principal and teacher response. In this case the choice of principals is contingent on choice of schools. It is random with probability directly proportional to size of school enrollment.

Statistical Treatment. The statistics for computation of the mean and variance of the mean appropriate for the teacher sample design are given by Leslie Kish in *Survey Sampling* (New York: John Wiley and Sons, Inc., 1965, p. 225.) The design assumes two random selections of schools per stratum with replacement and random selection of teachers within schools without replacement.

The formula for the ratio-mean of score (y) to count variable (x) is as follows:

$$r = \frac{y}{x} = \frac{\Sigma(y_{ha} + y_{hb})}{\Sigma(x_{ha} + x_{hb})}$$

where y_{ha} and y_{hb} are the totals for the scores of the paired selections (a, b) from the h_{th} stratum. The x_{ha} and x_{hb} are similar paired totals for the count variable. The variance of this ratio mean is:

$$var(r) = \frac{1 - f}{x^2} [\Sigma\, D^2 y_h + r^2 \Sigma\, D^2 x_h - 2r \Sigma\, Dy_h\, Dx_h],$$

where $D^2 y_h = (y_{ha} - y_{hb})^2$, $D^2 x_h = (x_{ha} - x_{hb})^2$,

and $Dy_h\, Dx_h = (y_{ha} - y_{hb})(x_{ha} - x_{hb})$.

f is the sampling fraction $x^2 = (\Sigma x_{ha} + \Sigma x_{hb})^2$

Please note that these statistics refer to the ratio of two random variables. The derivation of the variance is difficult and not entirely exact. However, the approximation is good when the coefficient of variation of sample size is suitably small (which was true for the two samples). The statistical tables report standard errors of the mean (S.E.m) which equal $\sqrt{var(r)}$.

Calculations of means and standard errors of the mean for the two principal groups employed standard statistics as follows:

$$\text{mean } (\bar{X}) = \frac{\Sigma Y}{N} \text{ where } Y \text{ is the score}$$

$$SE\ m = S\bar{x} = \sqrt{\frac{N\Sigma y^2 - (\Sigma y)^2}{N^2(N-1)}}$$

Calculation of t-tests of the differences of means between the four comparison groups (elementary school teachers vs. high school teachers, elementary school principals vs. high school principals, elementary school teachers vs. elementary school principals, and high school teachers vs. high school principals) were all based on the following statistics:

$$t = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{(S\bar{x}_1)^2 + (S\bar{x}_2)^2}}$$

Note that in the case of comparisons involving teachers and principals a small positive correlation between scores is commonly found. This correlation term (which would tend in most cases to make the denominator smaller and the t-test value larger) was not computed, hence the teacher-principal comparisons are conservative.

APPENDIX B

Request to Superintendent

Superintendents' Response Form

Description of Survey

Follow-up Letter to Superintendent

Cover Letter to Teacher

Educational Information Interest Survey Questionnaire

Follow-up Letter to Teacher

Follow-up Questionnaire

FAR WEST LABORATORY FOR EDUCATIONAL RESEARCH AND DEVELOPMENT
1 GARDEN CIRCLE. HOTEL CLAREMONT • BERKELEY, CALIFORNIA 94705 • TELEPHONE (415) 841-9710

Date

Superintendent
District
Street
City, State Zip

Dear :

The Far West Laboratory for Educational Research and Development is sponsoring a series of educational television programs to provide information about exciting new developments in education which will be of general interest to teachers and other school personnel. We are surveying the Bay Area to establish base line data and guide further programming. Two hundred schools have been chosen randomly with the intention of subsampling; including the principal and approximately four teachers to be selected randomly from the school's list of teachers.

We are requesting (1) your approval to contact the principal and the selected teachers in the schools listed below.
(2) comments on the acceptability or wording of any of the items.
(3) lists of teachers from the following school:

We plan to supply you and each respondent with a report of this survey. We will appreciate your assistance in helping us to conduct the survey. Please call or write if you have any questions. Thank you for your consideration.

Yours very truly,

Paul D. Hood
Program Director

PDH:ta

FAR WEST LABORATORY FOR EDUCATIONAL RESEARCH AND DEVELOPMENT

EDUCATIONAL INFORMATION INTEREST SURVEY

District Code:____________

☐ You have my permission to request the principal and a sample of teachers at the selected school(s) to answer this survey. I understand that you intend to re-sample the same school(s) at the end of the television series over KQED this spring. I am sending a list of teachers so that you can draw random samples from each school.

☐ Your request is denied. (If conditional, please indicate what we should do to obtain approval.)____________________

____

Comments or recommendations regarding questionnaire items (The questionnaire need not be returned -- or make marginal notes on and return the questionnaire.):

____

____

____

____

____

____

____

Further Comment or Inquiry:____________________________

____

____

Signature:____________________

Please return this page in the self-addressed envelope.

DESCRIPTION FOR SUPERINTENDENTS REGARDING THE EDUCATIONAL INFORMATION INTEREST SURVEY

The Far West Laboratory for Educational Research and Development will sponsor five educational television programs over KQED on Wednesdays, 8 to 8:30 AM and 3:30 to 4 PM beginning 12 April and continuing through 10 May. These are pilot programs for a series concerned with education innovation which will be continued in the fall. Pre- and post-series surveys will be conducted.

Purpose To develop base line data on teachers and other school personnel regarding interest in, knowledge of and attitudes toward educational innovation, research and development; and to develop auxiliary information on present sources of school information and characteristics of an information system.

Sample Elementary and secondary public school principals and teachers in fifteen Bay Area counties (initial survey of KQED television area). In order to obtain a representative sample with least demand on school personnel, multistage random sampling will be used involving approximately two hundred schools (stratified by elementary and secondary levels and by county and sampled with probability proportioned to size of school enrollment). The principal is automatically included, but teachers will be selected randomly from lists of teachers in each school. The technique will produce requirements in most cases for 3, 4, or 5 teachers (averaging 4) per school. Sampling with replacement resulted in selecting six schools twice; in these schools the number of teachers to be selected will range between 6 and 10.

FAR WEST LABORATORY FOR EDUCATIONAL RESEARCH AND DEVELOPMENT
1 Garden Circle, Hotel Claremont • Berkeley, California 94705 • Telephone (415) 841-9710

Date

Superintendent
District
Street
City, State

Dear :

I am writing to determine if your reason for declining to participate in the Educational Information Interest Survey is based primarily on the fact that you are not in the KQED viewing area. If this is true, please reconsider our request.

We are primarily concerned with determining knowledge of and attitudes toward educational innovation, research, and development on the part of teachers and principals in schools throughout the Bay Area. The reason for conducting the Survey at this time is tied to the desire to obtain base line data before the series of programs. However, our purpose is not simply to obtain pre-post measures in schools where teachers will be able to view the programs. Our eventual aim is to provide, through a variety of mass media and a responsive information service, a wider range of information which will enable school personnel to make more effective decisions concerning developments in education.

We consider it highly desirable that your district be represented in our survey in order that we may have as wide and unbiased a coverage as possible.

If this information should result in a decision to approve our request, would you please send lists of teachers from the selected schools:

If your decision is still no, would you please inform us so that we may drop your district from our sample.

Sincerely,

Paul D. Hood
Program Director

PDH:ta

FAR WEST LABORATORY FOR EDUCATIONAL RESEARCH AND DEVELOPMENT
1 GARDEN CIRCLE, HOTEL CLAREMONT • BERKELEY, CALIFORNIA 94705 • TELEPHONE (415) 841-9710

Date

Teacher
School
Street
City, State Zip

Dear   :

The Far West Laboratory for Educational Research and Development, which is funded by Title IV of the Elementary and Secondary Education Act of 1965, was created specifically to conduct programmatic research and development, in order that innovations in education can find practical application in the Far West Region (Northern California and Nevada) at the earliest possible date. To accomplish this objective the Laboratory is undertaking two major programs, one concerned with teacher education and the other with communication.

The Communication Program of the Laboratory has three components: (1) Mass media dissemination of information about educational innovation to school personnel, (2) Establishment of an information system responsive to inquiries about new developments in education, and (3) Creation of arrangements within the schools that could permit more effective utilization of information about educational developments.

To assist in the planning of the first and second component, we are conducting a survey of twelve Bay Area counties. We have selected two hundred schools randomly and have written to their respective district superintendents to explain our survey and obtain permission to contact the principal and a small number (approximately four chosen randomly) of the teaching staff. We earnestly request your cooperation in completing and returning the enclosed questionnaire to the Laboratory.

I assure you that your answers will be treated with full professional confidence. We shall ask you to fill out a much shorter (two page) follow-up survey in a couple of months and shall send you a report of the survey results as soon as they are completed.

Because our survey will involve a relatively small number of people, your answers are quite important to us if we are to obtain an unbiased representation. If you have further questions please write or call. Thank you.

Yours sincerely,

Paul D. Hood
Program Director

FAR WEST LABORATORY
FOR EDUCATIONAL RESEARCH AND DEVELOPMENT
1 Garden Circle, Hotel Claremont
Berkeley, California

EDUCATIONAL INFORMATION INTEREST SURVEY

The Far West Laboratory for Educational Research and Development is undertaking a program designed to provide school personnel in Northern California and Nevada with information regarding educational innovations that are being developed through research. One part of the program will provide school personnel, through educational television and printed matter, information about optional new ways of carrying on the work of the schools which may be of general interest. In preparation for this effort we are surveying a small sample of school personnel to determine how we can plan the program to make it most useful. Your answers to the following questions will help us to obtain an accurate estimate of your interest and attitudes.

Please complete each item to the best of your ability and return this form to us using the enclosed envelope. Your answers will be regarded by us as confidential and used for purposes of our research and planning only.

1___
2___
3___
4___
5___
6___

Personal and School Information:

Your name:________________________________

Name of school:________________________________

Present position:________________________________ 7___

Number of years of experience as a teacher, supervisor or administrator:____ 8___

If you are teaching, what subjects and grade levels do you teach:

9___

Subjects:________________________________ 10___

Grades:________________________________ 11___

The following information is needed to classify the school at which you are presently located:

Do any of these special groups listed constitute more than 20% of the student body? Check each alternative that applies.

☐ Negro 1 ☐ Mexican American 2 ☐ Children of Migrant Agricultural Workers 4 ☐ American Indian 8 ☐ None of these 0 12___

What type of area is the largest source of the student population? Check the one alternative that provides the largest fraction of the student population.

☐ rural 1 ☐ small city-town 2 ☐ suburban 3 ☐ urban 4 ☐ large urban 5 13___

How would you describe the socio-economic background of the majority of the student population? Check one alternative.

☐ lower income 1 ☐ lower middle income 2 ☐ upper middle income 3 ☐ upper income 4 14___

For Office Use

1

The Far West Laboratory for Educational Research and Development is planning a series of educational television programs showing important educational research and development activities for spring and fall of 1967. Please rate the following sample topics in terms of their interest to you. (Check one box for each item)

	✓ (5)	Strong Interest (4)	Moderate Interest (3)	Slight Interest (2)	No Interest (1)	
New developments in the teaching of:						
1. Reading.						(15)
2. Writing and Composition.						(16)
3. English Language Instruction						(17)
4. Modern Foreign Language Instruction.						(18)
5. Modern Math.						(19)
6. Science.						(20)
7. Social Science						(21)
8. Art and Humanities						(22)
9. Health and Physical Education.						(23)
10. Vocational Education						(24)
New methods, organization or technology in education:						
11. Programed Instruction.						(25)
12. Computers in the School.						(26)
13. Learning Laboratories.						(27)
14. Information Reduction, Storage and Retrieval . . .						(28)
15. Individually Prescribed Instruction.						(29)
16. Team Teaching.						(30)
17. Non-graded Schools						(31)
18. Audio-Visual and Multi-media Developments.						(32)
19. Modular Scheduling						(33)
Special topics:						
20. Defining and Assessing Educational Objectives. . .						(34)
21. Education and the Structure of Knowledge						(35)
22. Cognitive Development.						(36)
23. Learning Styles.						(37)
24. The Changing Role of the Teacher						(38)
25. Micro-teaching and In-service Training of Teachers						(39)
26. Federal Assistance to Education.						(40)
27. Teaching the Culturally Disadvantaged or Different						(41)
28. De facto Segregation and School Integration. . . .						(42)
29. School-Community Relations						(43)
30. Educational Parks.						(44)

Now, please place a second check (in the column headed by the ✓ mark) in the boxes of the five topics which you believe would be of greatest interest or value to most teachers.

What special topics not on this list regarding educational innovation, development or research would you like to see treated?____________________ 45___

____

____

The following questions concern your attitudes and opinions about educational research and development.

In your opinion what are the three most promising educational innovations known to you? Please indicate why you believe they are especially worthwhile. 46___

No. 1____

____

Why is this one important?____

____

No. 2____

____

Why is this one important?____

____

No. 3____

____

Why is this one important?____

____

In your opinion what are the two innovations being urged on the schools that are most open to question? Please indicate why they are questionable or less than promising. 47___

No. 1____

____

Why?____

____

No. 2____

____

Why?____

____

What percentage of total national expenditure for education do you think is currently spent on educational research and development? ______ per cent 48___

What percentage do you think should be spent on educational R & D?____per cent 49___

What percentage of their net sales do you think is spent on research and development by manufacturers of drugs and medicines? _____ per cent 50___

The following questions concern how you keep yourself informed about new developments in education.

Where do you obtain usable information concerning educational innovations, research and development?

Indicate how frequently you utilize each source by placing a check in one column for each of the sources identified below

	At least once a week	At least once a month	At least once a year	Practically never	
1. Professional books					(51)
2. Research reports and bulletins					(52)
3. Professional journals					(53)
4. Audio-visual materials					(54)
5. Educational television					(55)
6. Special courses					(56)
7. Conventions and conferences					(57)
8. Workshops					(58)
9. Visits					(59)
10. Informal personal contact					(60)
11. Public media					(61)

If a service were designed to provide school personnel with information about new developments and alternatives which might assist them in making choices or decisions about school matters, there would have to be some compromise in the design of its characteristics to keep it within cost limits.

Please rank the following characteristics in terms of their importance to you. Place a 1 in the box before the most important characteristic, a 2 in the box of the item next most important, and so on, through a 7 in the box after the item least important.

Ease of access to the information. . . . . . ☐ (62)

Speed of receipt of requested information. . ☐ (63)

Flexibility in level (amount) of detail. . . ☐ (64)

Comprehensive coverage . . . . ☐ (65)

Currency of the information. . . . . ☐ (66)

Evaluation of the material . . . . ☐ (67)

Thoroughly documented research data. . . . . ☐ (68)

Please read this letter on the assumption that it has been directed to your school and that your opinion has been solicited. Then answer the questions on the next page. If you are a teacher please assume that the XYZ curriculum method is appropriate for a subject which you teach. If you are an administrator assume that the curriculum method is appropriate for subjects taught in your school.

"The State University
Teacher Service Project
City, State

Gentlemen:

During the past several years a group - professors of education, teachers, and academicians - at the University has been developing the XYZ curriculum. Although we think that this curriculum has great promise, it clearly needs to be objectively tested, understood, and evaluated by actual application in the field. This necessity is particularly pressing since the application and use of XYZ procedures represent a considerable departure from usual curricular methods. We would request that your superintendent and Board make teacher participation an entirely voluntary matter.

We are writing to you to inquire whether you would be willing to participate in the field testing of the XYZ curriculum; your participation can be seen in several ways: we will need your evaluation of the curriculum, we will need to measure the gains and changes your students make when they study it; we will also need to evaluate the effects that it may have on changing your own procedures. This kind of information is necessary so that it can be known whether this is a useful and important innovation in education.

Concretely your participation would involve the following events:

(1) several workshops for the necessary training and acquaintanceship with the new materials and procedures; you would be compensated for your time.
(2) testing your students before and after their new experience.
(3) five or six observations of you and your classroom while instruction in the XYZ curriculum was going on in order to ascertain the nature of the differences that XYZ instruction was bringing about, if indeed, any difference is effected.

At this time we would appreciate only your reaction, not your solid commitment with regard to two things: (1) your own personal interest in participating; (2) your estimate of the reaction that other teachers and administrators in your district might have.

Yours sincerely,

Director, Teacher Service
Project"

What aspects of this proposal are attractive to you?____________________ 69___

____ 70___

What aspects of this proposal are unattractive to you?__________________

____ 71___

What is your personal response to this proposal? (Check the one alternative which is closest to your opinion) 72___

1 ☐ I would definitely refuse to participate.

2 ☐ I would be inclined not to participate, but might agree if most other teachers and schools participated.

3 ☐ I would be inclined to participate but would need much more information before deciding.

4 ☐ I would be quite interested in considering this proposal but would like more information.

How do you think most teachers in your district would respond? 73___

1 ☐ They would refuse.

2 ☐ They would be inclined not to participate.

3 ☐ They would be inclined to participate.

4 ☐ They would be quite interested in participating.

How do you think the school administration would respond? 74___

3 ☐ It would encourage participation.

2 ☐ I am not sure.

1 ☐ It would discourage participation.

How do you think the school board would respond? 75___

3 ☐ It would approve.

2 ☐ I am not sure.

1 ☐ It would disapprove.

We thank you for your cooperation in completing this questionnaire. Please use the enclosed self-addressed envelope to return it to the Far West Laboratory for Educational Research and Development, 1 Garden Circle, Hotel Claremont, Berkeley, California.

FAR WEST LABORATORY FOR EDUCATIONAL RESEARCH AND DEVELOPMENT
1 GARDEN CIRCLE. HOTEL CLAREMONT • BERKELEY, CALIFORNIA 94705 • TELEPHONE (415) 841-9710

Date

Teacher's Name
School
Address
City, State

Dear:

A few weeks ago a questionnaire was sent to you, the principal, and three other teachers in your school. We have received replies from some or all of the others and thus will be able to include your school in our survey. I have cut the original 6 pages to 2 (which contain the most important personal interest and knowledge items) in the hope that you will find it easier to supply this information which we need to complete our survey file on your school. Please help us by completing and returning the enclosed questionnaire.

Sincerely yours,

Paul D. Hood
Program Director

PDH:ta

Enclosure: "Programs"

EDUCATIONAL INFORMATION INTEREST SURVEY

The Far West Laboratory for Educational Research and Development is planning a series of educational television programs showing important educational research and development activities for spring and fall of 1967. Please rate the following sample topics in terms of their interest to you. (Check one box for each item)

New developments in the teaching of:

	✓ (5)	Strong Interest (4)	Moderate Interest (3)	Slight Interest (2)	No Interest (1)	
1. Reading						(15)
2. Writing and Composition						(16)
3. English Language Instruction						(17)
4. Modern Foreign Language Instruction						(18)
5. Modern Math						(19)
6. Science						(20)
7. Social Science						(21)
8. Art and Humanities						(22)
9. Health and Physical Education						(23)
10. Vocational Education						(24)

New methods, organization or technology in education:

	✓ (5)	Strong Interest (4)	Moderate Interest (3)	Slight Interest (2)	No Interest (1)	
11. Programed Instruction						(25)
12. Computers in the School						(26)
13. Learning Laboratories						(27)
14. Information Reduction, Storage and Retrieval						(28)
15. Individually Prescribed Instruction						(29)
16. Team Teaching						(30)
17. Non-graded Schools						(31)
18. Audio-Visual and Multi-media Developments						(32)
19. Modular Scheduling						(33)

Special topics:

	✓ (5)	Strong Interest (4)	Moderate Interest (3)	Slight Interest (2)	No Interest (1)	
20. Defining and Assessing Educational Objectives						(34)
21. Education and the Structure of Knowledge						(35)
22. Cognitive Development						(36)
23. Learning Styles						(37)
24. The Changing Role of the Teacher						(38)
25. Micro-teaching and In-service Training of Teachers						(39)
26. Federal Assistance to Education						(40)
27. Teaching the Culturally Disadvantaged or Different						(41)
28. De facto Segregation and School Integration						(42)
29. School-Community Relations						(43)
30. Educational Parks						(44)

Now, please place a second check (in the column headed by the ✓ mark) in the boxes of the five topics which you believe would be of greatest interest or value to most teachers.

What special topics not on this list regarding educational innovation, development or research would you like to see treated?____________________ 45___

____

____

The following questions concern your attitudes and opinions about educational research and development. - In your opinion what are the three most promising educational innovations known to you? Please indicate why you believe they are especially worthwhile. 46___

No. 1______________________________

____

Why is this one important?______________________________

____

No. 2______________________________

____

Why is this one important?______________________________

____

No. 3______________________________

____

Why is this one important?______________________________

____

In your opinion what are the two innovations being urged on the schools that are most open to question? Please indicate why they are questionable or less than promising. 47___

No. 1______________________________

____

Why?______________________________

____

No. 2______________________________

____

Why?______________________________

____

What subjects do you teach?______________________________ 5___

What grades do you teach?______________________________ 6___

How many years have you taught?______________________________ 7___

We thank you for your cooperation in completing this questionnaire. Please use the enclosed self-addressed envelope to return it. Your answers are confidential information and will be used for research and planning only. A report of findings will be sent to you.

2

APPENDIX C

Data Tables

Table 5: Interest in Sample T.V. Topics

Table 6: Estimates and Ratios of R and D Percentages

Table 7: Desired Characteristics of an Information System

Table 8: The XYZ Curriculum Proposal

TABLE 5

New Developments in the Teaching of:

Subject/Group	Significant Differences*				N	M	S.E.m	5 greatest interest to most teachers (5)	Strong interest (4)	Moderate interest (3)	Slight interest (2)	No interest (1)
	T	P	E	H				%	%	%	%	%
Reading												
Elementary Teachers	+				202	4.490	.0577	70	19	5	3	3
High School Teachers	-			-	150	3.800	.1188	41	20	21	14	4
Elementary Principals					88	4.580	.0717	65	31	3	0	1
High School Principals				+	39	4.564	.0884	59	38	3	0	0
Writing and Composition												
Elementary Teachers	+				202	3.668	.0751	27	36	20	13	5
High School Teachers	-				150	3.333	.0858	20	26	28	20	6
Elementary Principals				-	88	3.807	.1107	30	33	31	2	5
High School Principals				+	39	3.692	.1476	21	36	38	3	3
English Language Instruction												
Elementary Teachers	+		-		202	3.406	.0637	16	33	30	13	8
High School Teachers	-			-	150	3.033	.0963	11	27	31	20	11
Elementary Principals			+		88	3.807	.0954	25	36	34	3	1
High School Principals				+	39	3.564	.1715	15	49	18	13	5
Modern Foreign Language Instruction												
Elementary Teachers					202	2.495	.0964	8	15	22	26	29
High School Teachers				-	150	2.527	.1121	8	14	29	26	23
Elementary Principals		-			88	2.511	.1010	2	11	35	38	14
High School Principals		+		+	39	3.103	.1550	8	23	46	18	5
Modern Math												
Elementary Teachers	+				202	3.881	.1051	44	21	18	9	7
High School Teachers	-			-	150	2.767	.1060	8	21	28	22	20
Elementary Principals					88	3.693	.1014	23	33	38	5	2
High School Principals				+	39	3.487	.1596	13	44	26	15	3
Science												
Elementary Teachers	+				202	3.802	.1014	35	30	19	8	8
High School Teachers	-			-	150	2.893	.0851	8	22	39	17	15
Elementary Principals					88	3.807	.0940	26	32	40	1	1
High School Principals				+	39	3.667	.1060	8	54	36	3	0
Social Science												
Elementary Teachers	+				202	3.475	.0747	21	29	31	14	6
High School Teachers	-			-	150	3.133	.0767	11	28	36	18	8
Elementary Principals					88	3.625	.0987	19	33	41	5	2
High School Principals				+	39	3.769	.1539	21	46	28	0	5

*t-test @.05 level: T = Elem. vs. H.S. Teachers, P = Elem. vs. H.S. Principals, E = Elem. Teachers vs. Elem Principals, H = H.S. Teachers vs. H.S. Principals.

TABLE 5 (cont.)

Subject/Group	Significant Differences T	P	E	H	N	M	S.E.m	5 greatest interest to most teachers (5) %	Strong interest (4) %	Moderate interest (3) %	Slight interest (2) %	No interest (1) %
Art and Humanities												
Elementary Teachers					202	3.261	.0794	13	34	27	18	8
High School Teachers				-	150	3.367	.0645	17	34	24	19	5
Elementary Principals					88	3.375	.0960	10	34	40	15	1
High School Principals				+	39	3.718	.1556	23	36	33	5	3
Health and Physical Education												
Elementary Teachers			-		202	2.564	.1001	6	16	27	29	22
High School Teachers				-	150	2.480	.0881	8	14	23	30	25
Elementary Principals			+		88	2.977	.1108	5	30	34	23	9
High School Principals				+	39	2.821	.1464	3	18	46	26	8
Vocational Education												
Elementary Teachers	-		-		202	1.985	.0833	5	7	17	23	47
High School Teachers	+			-	150	3.393	.0869	23	28	24	17	8
Elementary Principals		-	+		88	2.398	.1226	5	14	25	31	26
High School Principals		+		+	39	3.949	.1270	23	54	18	5	0
Programmed Instruction												
Elementary Teachers					202	3.396	.0835	25	24	27	12	12
High School Teachers					150	3.593	.1001	31	26	23	13	7
Elementary Principals					88	3.614	.1204	25	32	28	9	6
High School Principals					39	3.744	.1590	28	26	41	3	3
Computers in the School												
Elementary Teachers	-				202	2.554	.0919	10	15	23	28	24
High School Teachers	+				150	3.067	.0947	14	21	31	25	10
Elementary Principals		-			88	2.727	.1207	6	20	31	27	16
High School Principals		+			39	3.385	.1859	10	49	23	5	13
Learning Laboratories												
Elementary Teachers			-		202	3.277	.0859	23	21	29	14	13
High School Teachers				-	150	3.307	.0936	16	25	36	20	3
Elementary Principals		-	+		88	3.625	.1119	20	39	28	8	5
High School Principals		+		+	39	4.051	.1323	31	49	15	5	0
Information Processing & Retrieval												
Elementary Teachers					202	2.470	.0843	7	14	26	23	29
High School Teachers					150	2.613	.0793	3	19	33	25	20
Elementary Principals					88	2.682	.1258	7	18	31	25	19
High School Principals					39	2.821	.1678	5	18	44	21	13
Individually Prescribed Instruction												
Elementary Teachers	+				202	3.842	.0696	37	30	19	8	6
High School Teachers	-				150	3.520	.1111	22	33	23	16	6
Elementary Principals					88	3.886	.1148	35	32	23	7	3
High School Principals					39	3.923	.1992	44	26	18	5	8

TABLE 5 (cont.)

Subject/Group	Significant Differences				N	M	S.E.m	5 greatest interest to most teachers (5)	Strong interest (4)	Moderate interest (3)	Slight interest (2)	No interest (1)
	T	P	E	H				%	%	%	%	%
Team Teaching												
Elementary Teachers					202	3.416	.0948	29	23	22	15	11
High School Teachers				-	150	3.447	.1056	25	21	31	19	5
Elementary Principals					88	3.602	.1215	28	24	31	14	3
High School Principals				+	39	3.846	.1582	31	33	26	10	0
Non-graded Schools												
Elementary Teachers					202	3.619	.0923	31	28	20	14	8
High School Teachers					150	3.360	.1010	28	20	28	12	12
Elementary Principals		+			88	3.568	.1229	27	25	28	16	3
High School Principals		-			39	3.026	.1702	5	31	36	18	10
Audio-Visual & Multi-media Developments												
Elementary Teachers	-				202	3.525	.0974	29	23	27	14	8
High School Teachers	+				150	3.807	.0851	37	27	22	12	2
Elementary Principals					88	3.636	.0986	20	33	36	10	0
High School Principals					39	3.718	.1467	21	38	36	3	3
Modular Scheduling												
Elementary Teachers	-		-		202	2.416	.0871	5	14	29	27	26
High School Teachers	+				150	3.380	.1173	27	22	21	19	11
Elementary Principals		-	+		88	2.716	.1188	3	24	31	25	17
High School Principals		+			39	3.615	.1822	23	38	21	13	5
Defining Educational Objectives												
Elementary Teachers	-		-		202	2.980	.0819	15	19	29	21	14
High School Teachers	+				150	3.340	.1047	24	22	24	21	8
Elementary Principals			+		88	3.580	.1140	20	36	28	10	5
High School Principals					39	3.410	.1632	13	36	36	10	5
Education & the Structure of Knowledge												
Elementary Teachers			-		202	2.822	.0709	6	21	36	22	15
High School Teachers				-	150	3.007	.0814	11	23	34	23	10
Elementary Principals			+		88	3.170	.0999	6	30	48	10	7
High School Principals				+	39	3.359	.1579	13	31	38	15	3
Cognitive Development												
Elementary Teachers					202	2.970	.0582	8	25	35	20	13
High School Teachers				-	150	2.873	.0887	6	22	38	22	12
Elementary Principals					88	3.159	.1186	14	20	43	14	9
High School Principals				+	39	3.256	.1590	10	28	44	13	5
Learning Styles												
Elementary Teachers					202	3.307	.0840	19	27	30	14	11
High School Teachers					150	3.220	.0931	14	21	43	17	4
Elementary Principals					88	3.534	.1119	18	36	31	10	5
High School Principals					39	3.513	.1464	13	38	38	8	3

TABLE 5 (cont.)

Subject/Group	Significant Differences T	P	E	H	N	M	S.E.m	5 greatest interest to most teachers (5) %	Strong interest (4) %	Moderate interest (3) %	Slight interest (2) %	No interest (1) %
The Changing Role of the Teacher												
Elementary Teachers			-		202	3.782	.0947	38	24	22	9	7
High School Teachers				-	150	3.873	.1011	45	19	23	9	5
Elementary Principals			+		88	4.159	.0955	43	34	19	2	1
High School Principals				+	39	4.385	.1252	56	26	18	0	0
Micro-teaching & Inservice Training												
Elementary Teachers			-		202	3.129	.0843	13	26	31	20	10
High School Teachers					150	3.120	.0879	11	27	36	19	8
Elementary Principals			+		88	3.409	.1004	14	30	43	11	2
High School Principals					39	3.359	.1702	15	28	38	13	5
Federal Assistance to Education												
Elementary Teachers	-				202	2.901	.0899	13	21	28	22	17
High School Teachers	+			+	150	3.193	.0806	15	27	29	21	8
Elementary Principals					88	2.989	.1126	5	31	34	20	10
High School Principals				-	39	2.846	.1494	0	31	28	36	5
Teaching the Culturally Different												
Elementary Teachers					202	3.545	.0973	29	28	19	15	9
High School Teachers					150	3.593	.0922	28	28	25	15	3
Elementary Principals					88	3.625	.1191	26	31	26	14	3
High School Principals					39	3.718	.1721	31	26	28	15	0
De Facto Segregation & School Integration												
Elementary Teachers	-				202	2.861	.0828	11	18	33	22	15
High School Teachers	+				150	3.147	.1023	19	22	27	21	12
Elementary Principals		-			88	2.841	.1107	5	22	39	24	11
High School Principals		+			39	3.410	.1827	23	23	26	28	0
School - Community Relations												
Elementary Teachers			-		202	3.178	.0864	17	22	33	19	10
High School Teachers					150	3.347	.1071	20	26	28	21	5
Elementary Principals			+		88	3.523	.1022	15	39	33	11	2
High School Principals					39	3.641	.1398	13	51	23	13	0
Educational Parks												
Elementary Teachers					202	2.688	.0860	6	18	29	29	17
High School Teachers					150	2.813	.0749	9	23	28	23	17
Elementary Principals					88	2.670	.1081	3	17	35	32	13
High School Principals					39	2.897	.1792	8	21	38	21	13
Number of Suggested Topics								4 or5	3	2	1	0
Elementary Teachers					202	.589	.0513	1	3	7	32	57
High School Teachers				+	150	.627	.0726	2	2	8	33	55
Elementary Principals					88	.628	.1194	2	7	8	20	63
High School Principals				-	39	.308	.0911	0	0	5	21	74

TABLE 6

Estimates and Ratios of R & D Percentages

Subject/Group	Significant Differences				N	M	S.E.m
	T	P	E	H			
Estimated Current Educational R & D Percent							
Elementary Teachers			+		107	11.27	1.32
High School Teachers				+	76	7.87	1.24
Elementary Principals			-		53	6.84	1.57
High School Principals				-	24	4.15	1.14
Should Spend on Educational R & D Percent							
Elementary Teachers	+		+		103	22.65	1.67
High School Teachers	-				79	16.86	1.73
Elementary Principals			-		z51	15.59	1.83
High School Principals					21	14.14	2.98
Drug and Medicine R & D Percent							
Elementary Teachers	+				106	34.53	2.15
High School Teachers	-				77	27.05	1.69
Elementary Principals					53	28.94	2.43
High School Principals					23	29.83	4.01

Subject/Group	Significant Differences				N	M	S.E.m
	T	P	E	H			
Ratio of Estimated Should to Current Educational R & D*							
Elementary Teachers			-		97	4.46	0.72
High School Teachers					72	7.97	2.11
Elementary Principals			+		51	8.11	1.63
High School Principals					21	9.02	2.40
Ratio of Estimated Drug R & D to Educational R & D*							
Elementary Teachers	-		-		94	8.57	1.24
High School Teachers	+				65	13.16	1.28
Elementary Principals			+		51	16.09	2.23
High School Principals					23	19.20	3.65

* Extreme ratios of estimates have been reduced to 50 to 1

TABLE 7

Desired Characteristics of an Information Service

	Significant Differences							Rank of Characteristics						
								most (1)	(2)	(3)	(4)	(5)	(6)	least (7)
	T	P	E	H	N	M	S.E.m	%	%	%	%	%	%	%
Ease of Access to Information														
Elementary Teachers					152	2.171	.1407	50	23	8	6	7	4	1
High School Teachers					127	2.339	.1352	53	13	8	8	7	9	2
Elementary Principals					73	2.438	.1303	48	16	8	10	11	3	4
High School Principals					29	2.517	.3315	48	10	10	10	14	7	0
Speed of Receipt of Request														
Elementary Teachers	-		-		152	3.717	.1564	10	24	16	15	11	17	7
High School Teachers	+				127	4.165	.1633	5	23	16	11	14	16	16
Elementary Principals			+		73	4.315	.1825	3	16	21	16	12	14	18
High School Principals					29	4.724	.3174	0	14	14	17	14	24	17
Flexibility in Amount of Detail														
Elementary Teachers			-		152	4.961	.1188	3	11	8	16	20	17	26
High School Teachers					127	4.843	.1623	2	4	15	20	19	21	18
Elementary Principals			+		72	5.514	.1510	1	4	6	13	15	29	32
High School Principals					29	5.414	.3237	7	0	7	10	17	24	34
Comprehensive Coverage														
Elementary Teachers					152	4.026	.1394	10	11	22	15	19	18	6
High School Teachers					127	3.850	.1151	9	11	21	21	25	9	4
Elementary Principals					72	4.208	.1711	4	17	15	17	24	13	11
High School Principals					29	4.241	.3279	14	3	10	21	28	17	7
Currency of the Information														
Elementary Teachers					152	3.645	.1388	13	13	24	19	15	8	9
High School Teachers					127	3.307	.1587	13	29	18	20	7	7	6
Elementary Principals					73	3.479	.1757	14	22	15	23	11	8	7
High School Principals					29	3.345	.2496	3	21	45	10	14	3	3
Evaluation of the Material														
Elementary Teachers			+		152	4.368	.1325	8	10	15	17	16	24	11
High School Teachers				+	127	4.551	.1666	7	10	18	12	14	19	20
Elementary Principals			-		72	3.819	.1826	10	18	24	8	18	14	8
High School Principals				-	29	3.655	.3484	3	38	14	14	7	14	10
Thoroughly Documented Research Data														
Elementary Teachers			+		152	4.921	.1619	10	9	7	14	13	11	36
High School Teachers					127	4.898	.1617	10	11	5	8	15	18	34
Elementary Principals			-		72	4.056	.2188	21	8	13	14	10	17	18
High School Principals					29	4.103	.4503	24	14	0	17	7	10	28

TABLE 8

The XYZ Curriculum Proposal

Subject/Group	Significant Differences				N	M	S.E.m	be quite interested (4)	be inclined to participate (3)	be inclined not to partipate (2)	definitely refuse (1)
	T	P	E	H				%	%	%	%
I would											
Elementary Teachers			-		154	3.364	.0508	47	44	8	1
High School Teachers					129	3.388	.0608	48	45	5	2
Elementary Principals			+		72	3.556	.0528	57	42	1	0
High School Principals					31	3.452	.1846	71	16	0	13
Most teachers in the district would											
Elementary Teachers			-		148	2.682	.0466	5	59	33	2
High School Teachers				-	126	2.587	.0778	6	50	40	3
Elementary Principals			+		71	3.070	.0617	23	62	15	0
High School Principals				+	31	3.032	.1268	26	52	23	0

Subject/Group	Significant Differences				N	M	S.E.m		encourage participation (3)	"I am not sure" (2)	discourage participation (1)
	T	P	E	H					%	%	%
The school administration would											
Elementary Teachers			-		153	2.562	.0427		56	44	0
High School Teachers				-	129	2.605	.0519		63	35	2
Elementary Principals			+		72	2.778	.0419		78	22	0
High School Principals				+	31	2.806	.0857		84	13	3

Subject/Group	Significant Differences				N	M	S.E.m		approve (3)	"I am not sure" (2)	disapprove (1)
	T	P	E	H					%	%	%
The school board would											
Elementary Teachers			-		153	2.301	.0445		35	61	4
High School Teachers				-	129	2.426	.0554		44	54	2
Elementary Principals			+		72	2.597	.0522		61	38	1
High School Principals				+	31	2.742	.0799		74	26	0